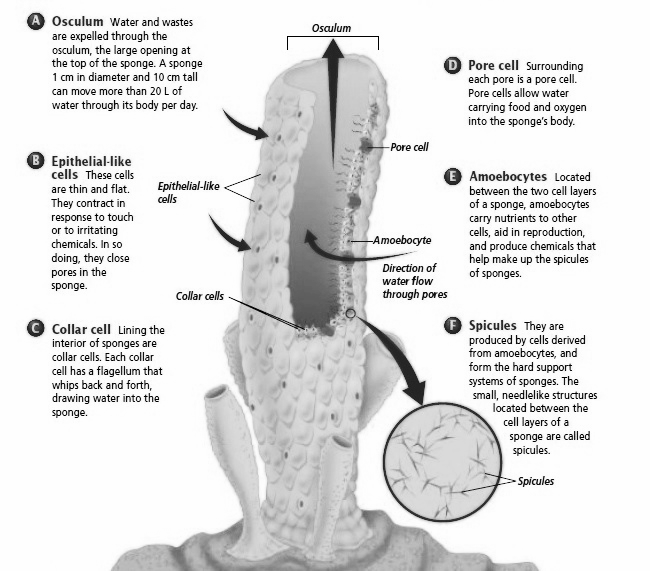
**Invertebrates: Porifera (Sponges)**

**Kingdom: Animalia**

**Phylum: Porifera**

|  |  |
| --- | --- |
| * Multicellular | * Few specialized cells (cells with a specific “job”)--no tissues, no organs |
| * Invertebrates | * Asymmetrical--no front or back |
| * Heterotrophic | * Sessile--attached to ONE spot their entire lives |
| * No cell wall * Marine/salt water or fresh water   --most in salt water | * Variety of sizes (size of quarter or size of door) and types (5,000 species: bath sponges, glass sponges, etc.) |
| * Filter feeders: filters small particles of food from water | * Most are hermaphroditic--contain both sexes * Made of spicules (hard, spike-like structures) *or* spongin (fibrous spongy material) |



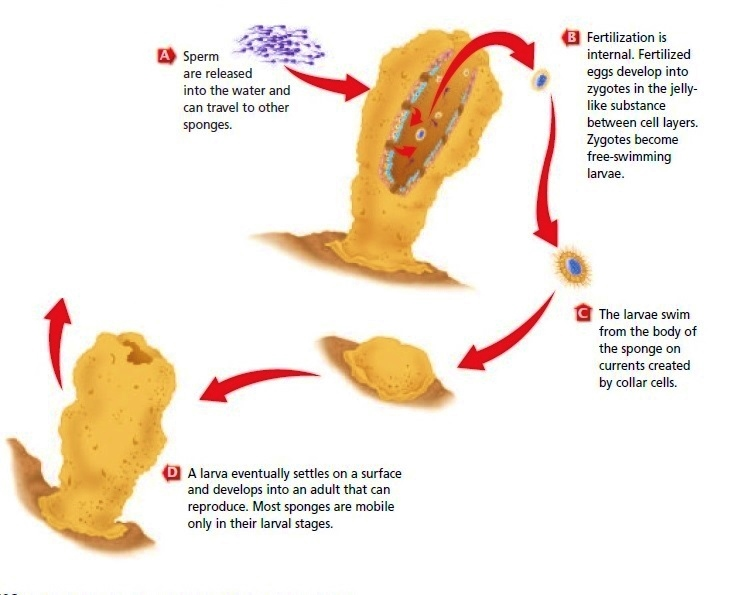
Reproduction

Performs 2 types:

* Sexual: most common method; most are hermaphroditic (contain both sexes; produces both sperm and eggs)

### Sperm released by one sponge can be carried by water currents to fertilize another sponge. Fertilization in sponges can be external or internal.

* + - *External*: sperm fertilizes eggs fertilized outside the sponge
    - *Internal (more common)*: the eggs inside the animal’s body are fertilized by sperm from another sponge. The sperm are carried into the sponge by water. Fertilization occurs and the result is the development of free-swimming larvae. The larvae settle and grow into adult sponges.



* Asexual: method of asexual reproduction depends on species of sponge:
  + budding: external growth-->bud may stay attached or drop off and

form new sponge

* + fragmentation: splits into fragments
  + gemmule formation: gemmules (seed-like) form when water

temperatures are cool-->adult sponge dies but

gemmules “survive”-->when water warms in

spring, gemmules form new sponges

Three (Major) Types of Sponges:

